



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,441	07/23/2003	Stein Lundby	PA693C1	9610
23696 7590 03/14/2007 QUALCOMM INCORPORATED 5775 MOREHOUSE DR. SAN DIEGO, CA 92121			EXAMINER TSE, YOUNG TOI	
			ART UNIT	PAPER NUMBER
			2611	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	03/14/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 03/14/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

us-docketing@qualcomm.com  
kscanla@qualcomm.com  
t\_ssadik@qualcomm.com

**Office Action Summary**

Application No.

10/626,441

Applicant(s)

LUNDBY ET AL.

Examiner

YOUNG T. TSE

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 16-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 20030818.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of Group I (claims 1-15) in the reply filed on December 15, 2006 is acknowledged.

### ***Information Disclosure Statement***

2. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered. See paragraph [0026].

### ***Drawings***

3. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to because the three reference signs "12" for fingers shown in Fig. 2 should be labeled "12A", "12B", and "12C", respectively, see paragraph [0032]. Further, in Fig. 4, "12B", "12C", and "12C" should be labeled "12A", "12B", and "12C", respectively, see paragraph [0061]. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: the reference characters "24" and "38" shown in Fig. 2 and the reference characters "122", "126", "128", "136", and "146 shown in Fig. 4 are not described in the specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

6. The disclosure is objected to because of the following informalities:

In paragraph [0001], the application No. 09/182,367 needs to be updated, now U.S. Patent No. 6,625,197.

In paragraph [0063], the application No. 08/856,428 needs to be updated, now abandoned.

In paragraph [0080], line 6, "206a" should be "206".

In paragraph [0084], line 2, "210c" should be "210d".

In paragraph [0087], line 10, "210" should be "310".

In paragraph [0090], lines 3 and 4, "204a" and "206" should be "304a" and "306", respectively.

In the last line of paragraphs [0090], [00140], [00143], [00151], [00157], and [00168], "150a" should be "150".

In paragraph [0091], last line, there is no space between "multiplier" and "314a".

In paragraph [0092], line 3, "224" should be "324".

In paragraph [0094], lines 8 and 10, "212c" and "214c" should be "312c" and "314c", respectively.

In paragraph [0096], last line, "306b" should be "306".

In paragraph [0098], line 3, the term "which is delayed by one PN chip interval by delay element 316" is not understood since the reference sign "316" is not shown in Fig. 7.

In line 1 of both paragraphs [00104] and [00107], "398" should be "318".

In paragraph [00107], line 2 (both occurrences), "420" should be "422a".

In paragraph [00113], line 1, "399" should be "319".

In paragraph [00114], line 4, "406b" should be "406".

In paragraph [00116], line 1, "399" should be "319".

In paragraph [00128], line 26, "150c" should be "150d".

In paragraph [00147], line 4, "FIG. 10" should be "FIG. 11".

In paragraph [00148], last line, "656" should be "606".

In paragraph [00151], line 7, "656" should be "606".

The description of paragraph [00166] does not correspond to the drawing of Fig.

13.

In paragraph [00167], lines 1 and 2, "830" and "combiners 834b" should be "830a and 830b" and "combiner 834b", respectively.

Appropriate correction is required.

7. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Objections***

8. Claims 2-5 and 14 are objected to because of the following informalities:

In claim 2, line 1, "demodulator" should be "demodulator means",

In claim 4, line 5, "spectrum with" should be "spectrum signal with".

The dependent claims 3 and 5 either directly or indirectly dependent upon claim

2.

In claim 14, line 1, "said step of" should be "said means for".

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. Claims 1-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 1, 8, 13 and 15 contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. For example, claim 1 recites second demodulator means for demodulating a second spread spectrum signal of the multiple spread spectrum signals in accordance with a fixed time interval different with respect to the first arrival time. However, according to the present invention shown in Fig. 6, the fixed time interval 208 for the second demodulator 204A or 204B is in addition or after the first arrival time of the propagation time of the first demodulator 204c or 204d, as further recited in claim 7. In other words, the combination of the fixed time interval 208 and the first time interval propagated from the first demodulator may not be a fixed time interval anymore. Also see claims 8, 13 and 15.



11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claims 2-3, 6, 9-11 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 2 (lines 4-5 and 6), claim 3 (lines 2-3 and 5-6), claim 9 (lines 4-6), claim 10 (lines 3-4), and claim 14 (lines 5-6 and 8), the terms "said pseudorandom noise descrambled signal", "said phase adjusted signal", "said second dechannelization means", and "said second orthogonal channel sequence" all lack antecedent basis.

In claim 6 (lines 4-5) and claim 11 (line 3), the term "said spread spectrum signal" also lacks antecedent basis because it is unclear the first spread spectrum signal or the second spread spectrum signal.

In claim 2, the phase adjusting means lacks connection or cooperation with the pseudorandom noise descrambling means, and the dechannelization means also lacks connection or cooperation with the phase adjusting means.

In claim 3, lines 2-3, the term "said second dechannelization means further comprises" is not understood since the precedent claim 2 recites the detailed elements of the first demodulator means only.

In claim 9, the extracting step lacks connection or cooperation with the descrambling step, and the second multiplying step also lacks connection or cooperation with the first multiplying step.

### ***Double Patenting***

13. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

14. Claims 1-3, 6-11 and 13-14 are rejected on the ground of nonstatutory double patenting over claims 1, 3, 5, 8 and 10 of U. S. Patent No. 6,625,197 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: independent claims 1 and 13 of the instant application correspond to a section of independent claim 1 of U. S. Patent No. 6,625,197; further, the dependent claims 2-3 and 14 of the instant application correspond to the other section of the independent claim 1 of U. S. Patent No. 6,625,197. For the same reasons, independent claim 8 of the instant application

corresponds to a section of independent claim 8 of U. S. Patent No. 6,625,197; further, the dependent claims 9 and 10 of the instant application correspond to the other section of the independent claim 8 of U. S. Patent No. 6,625,197. Wherein claims 6-7 and 11 of the instant application correspond to claims 3, 5 and 10 of U. S. Patent No. 6,625,197, respectively.

Although the conflicting claims (1-3, 8-10, and 13-14) are not identical, they are not patentably distinct from each other because the broader claim(s) of the instant application would have been obvious in view of the narrow issued claim(s) of the U.S. Patent No. 6,625,197 (see *In re Emert*, 124 F.3d 1458, 44USPQ2d 1149).

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

### ***Claim Rejections - 35 USC § 102***

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

16. Claims 1, 6-8, 11-13 and 15 rejected under 35 U.S.C. 102(e) as being anticipated by Kobayakawa et al. U. S. Patent No. 6,064,338 (hereinafter "Kobayakawa").

Regarding claims 1, 8, 13 and 15, Kobayakawa discloses a Rake receiver in Fig. 3 comprising first demodulator means or step (finger 6<sub>1</sub>) for demodulating a first spread spectrum signal of multiple spread spectrum signals in accordance with a first arrival time; and second demodulator means or step (finger 6<sub>2</sub>) for demodulating a second spread spectrum signal of said multiple spread spectrum signals in accordance with a fixed time interval difference with respect to said first arrival time. See col. 7, line 65 to col. 48 and col. 9, line 65 to col. 10, line 3.

Regarding claims 6 and 11, the Rake receiver further comprises a combining means or step (7) for combining the demodulated spread spectrum signals of the first and second demodulator means.

Regarding claims 7 and 12, the Rake receiver further comprises switching means or step (a path selector 32) for switching the propagation among the demodulators or fingers.

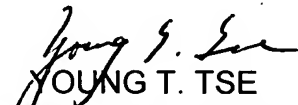
### ***Conclusion***

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References Easton, La Rosa et al., Wang et al., Madhow et al., and Mizuguchi et al. relate to spread spectrum receivers or Rake receivers, each receiver comprises a plurality of demodulators or fingers for demodulating receive signals through propagation paths, one path for each channel.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOUNG T. TSE whose telephone number is (571) 272-3051. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
YOUNG T. TSE  
Primary Examiner  
Art Unit 2611